#### C.C. HARNESS, III (1949-2010)

## Austin & Rogers, P.A.

ATTORNEYS AND COUNSELORS AT LAW

TIMOTHY F. ROGERS RAYMON E. LARK, JR. RICHARD L. WHITT EDWARD L. EUBANKS W. MICHAEL DUNCAN COLUMBIA OFFICE:

CONGAREE BUILDING
508 HAMPTON STREET, SUITE 300
POST OFFICE BOX 11716
COLUMBIA, SOUTH CAROLINA 29201
TELEPHONE: (803) 256-4000
FACSIMILE: (803) 252-3679
WWW.AUSTINROGERSPA.COM

OF COUNSEL: WILLIAM FREDERICK AUSTIN JEFFERSON D. GRIFFITH, III\*

\* ALSO ADMITTED IN N.C.

May 24, 2016

### VIA, ELECTRONIC FILING

The Honorable Jocelyn Boyd Chief Clerk and Administrator The Public Service Commission of South Carolina 101 Executive Center Drive Columbia, South Carolina 29210

Re: • Lily Solar LLC vs. South Carolina Electric & Gas Company

• 2016-89-E

Dear Ms. Boyd:

Enclosed for filing, please find Lily Solar LLC's Supplement to its discovery filing with this Commission on May 20, 2016, with Commission ID "264524", Cover Sheet and Certificate of Service.

Resp	ectfully Submitted,
/S/_	
Rich	ard L. Whitt

RLW/cas



## APPENDIX 3 to LGIP INTERCONNECTION SYSTEM IMPACT STUDY AGREEMENT

THIS AGREEMENT is made and entered into this day of \_\_\_\_\_\_\_\_\_, 2015 by and between Lily Solar, LLC, a limited liability company organized and existing under the laws of the State of South Carolina, ("Interconnection Customer,") and South Carolina Electric & Gas Company a corporation existing under the laws of the State of , ("Transmission Provider"). Interconnection Customer and Transmission Provider each may be referred to as a "Party," or collectively as the "Parties."

#### RECITALS

WHEREAS, Interconnection Customer is proposing to develop a Large Generating Facility or generating capacity addition to an existing Generating Facility consistent with the Interconnection Request submitted by Interconnection Customer dated February 16<sup>th</sup>, 2015; and

WHEREAS, Interconnection Customer desires to interconnect the Large Generating Facility with the Transmission System;

WHEREAS, Transmission Provider has completed an Interconnection Feasibility Study (the "Feasibility Study") and provided the results of said study to Interconnection Customer (This recital to be omitted if Transmission Provider does not require the Interconnection Feasibility Study.); and

WHEREAS, Interconnection Customer has requested Transmission Provider to perform an Interconnection System Impact Study to assess the impact of interconnecting the Large Generating Facility to the Transmission System, and of any Affected Systems;

NOW, THEREFORE, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in Transmission Provider's FERCapproved LGIP.
- 2.0 Interconnection Customer elects and Transmission Provider shall cause to be performed an Interconnection System Impact Study consistent with Section 7.0 of this LGIP in accordance with the Tariff.

- 3.0 The scope of the Interconnection System Impact Study shall be subject to the assumptions set forth in Attachment A to this Agreement.
- 4.0 The Interconnection System Impact Study will be based upon the results of the Interconnection Feasibility Study and the technical information provided by Interconnection Customer in the Interconnection Request, subject to any modifications in accordance with Section 4.4 of the LGIP. Transmission Provider reserves the right to request additional technical information from Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the Interconnection Customer System Impact Study. If Interconnection Customer modifies its designated Point of Interconnection, Interconnection Request, or the technical information provided therein is modified, the time to complete the Interconnection System Impact Study may be extended.
- 5.0 The Interconnection System Impact Study report shall provide the following information:
  - identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;
  - identification of any thermal overload or voltage limit violations resulting from the interconnection;
  - identification of any instability or inadequately damped response to system disturbances resulting from the interconnection and
  - description and non-binding, good faith estimated cost of facilities required to interconnect the Large Generating Facility to the Transmission System and to address the identified short circuit, instability, and power flow issues.
- 6.0 Interconnection Customer shall provide a deposit of \$50,000 for the performance of the Interconnection System Impact Study. Transmission Provider's good faith estimate for the time of completion of the Interconnection System Impact Study is July 9<sup>th</sup>, 2015.

Upon receipt of the Interconnection System Impact Study, Transmission Provider shall charge and Interconnection Customer shall pay the actual costs of the Interconnection System Impact Study.

- Any difference between the deposit and the actual cost of the study shall be paid by or refunded to Interconnection Customer, as appropriate.
- 7.0 Miscellaneous. The Interconnection System Impact Study Agreement shall include standard miscellaneous terms including, but not limited to, indemnities, representations, disclaimers, warranties, governing law, amendment, execution, waiver, enforceability and assignment, that reflect best practices in the electric industry, that are consistent with regional practices, Applicable Laws and Regulations and the organizational nature of each Party. All of these provisions, to the extent practicable, shall be consistent with the provisions of the LGIP and the LGIA.

IN WITNESS THEREOF, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

SCE&G
By: Pandelis Janobakus
Title: VP Electric Transmission
Date: 3 23 15
Lily Solar, LLC National Renewable Energy Corporation  By: Jesse Martyonery  By: Tesse Martyonery  The President, Development
By: Lesse many ment
Title: Member
Date: 3/13/15

Attachment A To Appendix 3 Interconnection System Impact Study Agreement

# ASSUMPTIONS USED IN CONDUCTING THE INTERCONNECTION SYSTEM IMPACT STUDY

The Interconnection System Impact Study will be based upon the results of the Interconnection Feasibility Study, subject to any modifications in accordance with Section 4.4 of the LGIP, and the following assumptions:

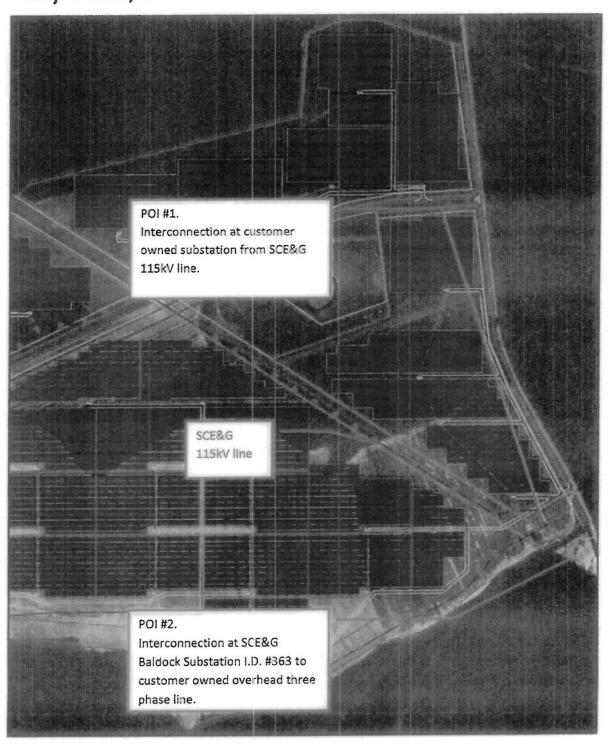
Designation of Point of Interconnection and configuration to be studied. Designation of alternative Point(s) of Interconnection and configuration.

[Above assumptions to be completed by Interconnection Customer and other assumptions to be provided by Interconnection Customer and Transmission Provider]

Points of Interconnection to be studied:

- 1. POI at customer owned substation as depicted on Drawing 1-1
- 2. POI at SCE&G Baldock Substation I.D. #363 as depicted on Drawing 1-1

# Drawing 1-1 Lily Solar, LLC





# APPENDIX 4 to LGIP INTERCONNECTION FACILITIES STUDY AGREEMENT

THIS AGREEMENT is made and entered into this 22 day of July 20 15 by and between Lily Solar LLC, a limited liability company organized and existing under the laws of the State of South Carolina, ("Interconnection Customer,") and South Carolina Electric & Gas Company a corporation existing under the laws of the State of South Carolina, ("Transmission Provider"). Interconnection Customer and Transmission Provider each may be referred to as a "Party," or collectively as the "Parties."

#### RECITALS

WHEREAS, Interconnection Customer is proposing to develop a Large Generating Facility or generating capacity addition to an existing Generating Facility consistent with the Interconnection Request submitted by Interconnection Customer dated February 16<sup>th</sup>, 2015; and

WHEREAS, Interconnection Customer desires to interconnect the Large Generating Facility with the Transmission System;

WHEREAS, Transmission Provider has completed an Interconnection System Impact Study (the "System Impact Study") and provided the results of said study to Interconnection Customer; and

WHEREAS, Interconnection Customer has requested Transmission Provider to perform an Interconnection Facilities Study to specify and estimate the cost of the equipment, engineering, procurement and construction work needed to implement the conclusions of the Interconnection System Impact Study in accordance with Good Utility Practice to physically and electrically connect the Large Generating Facility to the Transmission System.

NOW, THEREFORE, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in Transmission Provider's FERCapproved LGIP.
- 2.0 Interconnection Customer elects and Transmission Provider shall cause an Interconnection Facilities Study consistent with Section 8.0 of this LGIP to be performed in accordance with the Tariff.
- 3.0 The scope of the Interconnection Facilities Study shall be subject to the assumptions set forth in Attachment A and the data provided in Attachment B to this Agreement.
- 4.0 The Interconnection Facilities Study report (i) shall provide a description, estimated cost of (consistent with Attachment A), schedule for required facilities to interconnect the Large Generating Facility to the Transmission System and (ii) shall address the short circuit, instability, and power flow issues identified in the Interconnection System Impact Study.
- 5.0 Interconnection Customer shall provide a deposit of \$100,000 for the performance of the Interconnection Facilities Study. The time for completion of the Interconnection Facilities Study is specified in Attachment A.
  - Transmission Provider shall invoice Interconnection Customer on a monthly basis for the work to be conducted on the Interconnection Facilities Study each month. Interconnection Customer shall pay invoiced amounts within thirty (30) Calendar Days of receipt of invoice. Transmission Provider shall continue to hold the amounts on deposit until settlement of the final invoice.
- 6.0 Miscellaneous. The Interconnection Facility Study Agreement shall include standard miscellaneous terms including, but not limited to, indemnities, representations, disclaimers, warranties, governing law, amendment, execution, waiver, enforceability and assignment, that reflect

best practices in the electric industry, and that are consistent with regional practices, Applicable Laws and Regulations, and the organizational nature of each Party. All of these provisions, to the extent practicable, shall be consistent with the provisions of the LGIP and the LGIA.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

South Carolina Electric & Gas C	ompany		
By: Parletis Kanthalos	By:		
Title: UP- Electric Transm	Sile Title:	4	
Date: 7 23 2015	Date:		
Lily Solar LLC  By: National Renewable Energy Co  By Lin Mubining  Jesse Montgomery  Title: It's President, Development  Date 7/22/2015	rporation		

Attachment A to Appendix 4
Interconnection Facilities
Study Agreement

# INTERCONNECTION CUSTOMER SCHEDULE ELECTION FOR CONDUCTING THE INTERCONNECTION FACILITIES STUDY

Transmission Provider shall use Reasonable Efforts to complete the study and issue a draft Interconnection Facilities Study report to Interconnection Customer within the following number of days after of receipt of an executed copy of this Interconnection Facilities Study Agreement:

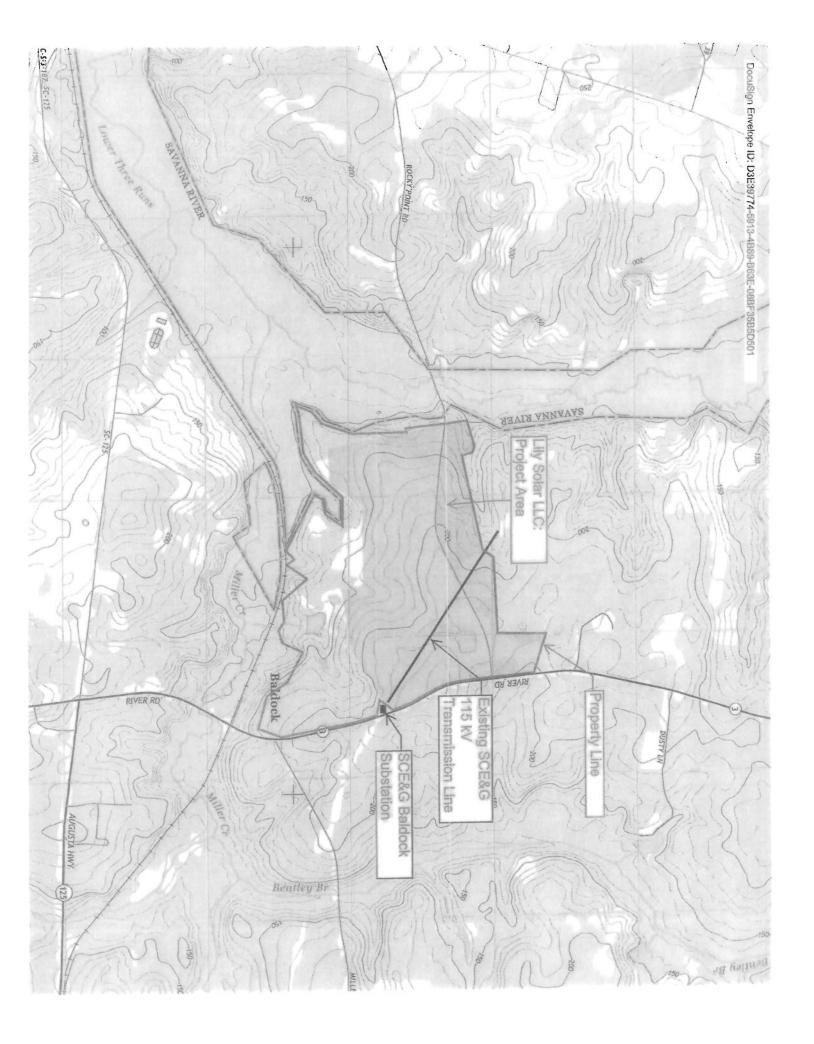
- ninety (90) Calendar Days with no more than a +/- 20 percent cost estimate contained in the report, or
- one hundred eighty (180) Calendar Days with no more than a +/- 10 percent cost estimate contained in the report.

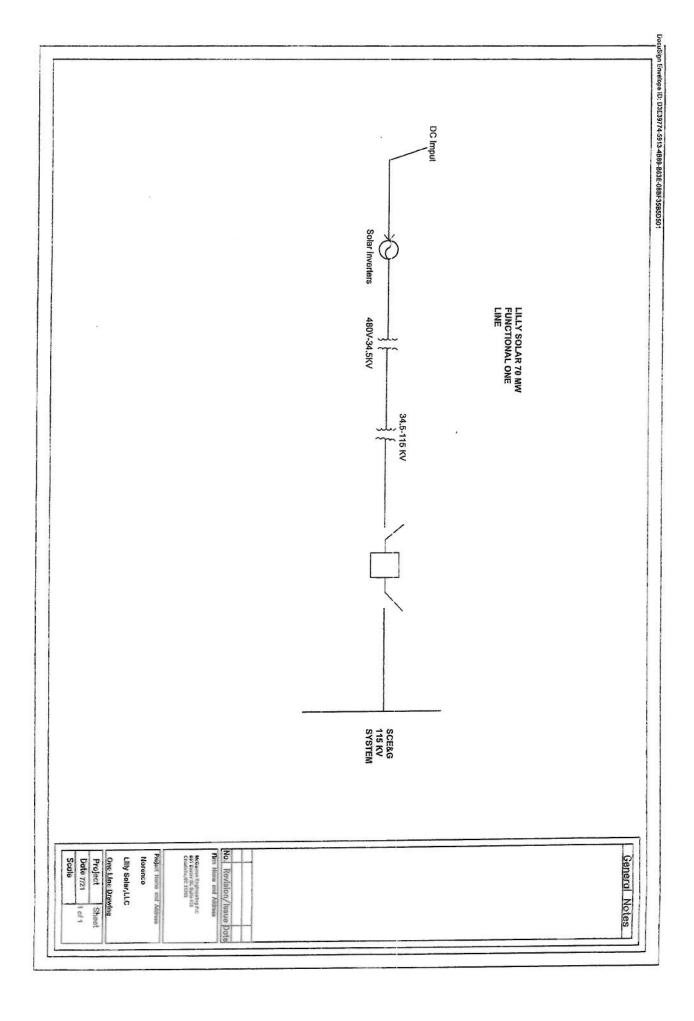
Attachment B to Appendix 4
Interconnection Facilities
Study Agreement

# DATA FORM TO BE PROVIDED BY INTERCONNECTION CUSTOMER WITH THE INTERCONNECTION FACILITIES STUDY AGREEMENT

Provide location plan and simplified one-line diagram of the plant and station facilities.  For staged projects, please indicate future generation, transmission circuits, etc.  Location Plan and one-line diagram remain the same as originally submitted in the interconnection application.  One set of metering is required for each generation connection to the new ring bus or existing Transmission Provider station. Number of generation connections: 1
On the one line diagram indicate the generation capacity attached at each metering location. (Maximum load on CT/PT)
On the one line diagram indicate the location of auxiliary power. (Minimum load on CT/PT) Amps
Will an alternate source of auxiliary power be available during CT/PT maintenance? YesNo
Will a transfer bus on the generation side of the metering require that each meter set be designed for the total plant generation?YesNo (Please indicate on one line diagram).
What type of control system or PLC will be located at Interconnection Customer's Large Generating Facility?  TMEIC Solar Ware Inverter communication controller over Ethernet
What protocol does the control system or PLC use?
Please provide a 7.5-minute quadrangle of the site. Sketch the plant, station, transmission line, and property line. (Attached)

Physical dimensions of the proposed interconnection station:  Approximately 150 feet by 150 feet square fenced area				
Bus length from generation to interconnection station:				
Line length from interconnection station to Transmission Provider's transmission line.				
Tower number observed in the field. (Painted on tower leg)*				
Number of third party easements required for transmission lines*:				
* To be completed in coordination with Transmission Provider.				
Is the Large Generating Facility in the Transmission Provider's service area?				
YesNo Local provider:				
Please provide proposed schedule dates:				
Begin Construction	Date: 2/1/16			
Generator step-up transformer receives back feed power	Date: 8/1/16			
Generation Testing	Date: 8/1/16			
Commercial Operation	Date: 9/1/16			







Bret Sowers < bret.sowers@narenco.com>

## **RE:** Generator Interconnection Procedures

1 message

HAMMOND, MATTHEW J (MATT) <MHAMMOND@scana.com>
To: Bret Sowers <br/>bret.sowers@narenco.com>

Tue, Jan 27, 2015 at 7:22 AM

Bret.

SCE&G's Large Generator Interconnection Procedure is Attachment M to the Open Access Transmission Tariff. From the OASIS site, select the folder on the left titled *Currently Effective OATT*. Our Tariff is listed there.

Take care,

Matt Hammond

South Carolina Electric & Gas

Manager, Electric Transmission Support

803-217-2175

#### Confidentiality Notice

This communication may contain <u>non-public transmission</u> information that is proprietary, and subject to disclosure limitations. This information should not be shared with, forwarded to, or read by any SCANA electric or gas marketing function employee. If you have received this message in error, please notify the sender immediately by reply to this email, and copy Kevin Painter (kpainter@scana.com) and delete all copies of this message.





## Lily Solar System Impact Study

1 message

STONE, DJ < DJSTONE@scana.com>

To: Bret Sowers <br/> sowers@narenco.com>

Mon, Jun 22, 2015 at 3:31 PM

Cc: Electric Transmission Support <ElectricTransmission@scana.com>, "HAMMOND, MATTHEW J (MATT)" <MHAMMOND@scana.com>

Bret,

Attached is the System Impact Study Report for Lily Solar. Per our Tariff, we are required to offer a System Impact Study meeting to discuss the report. Therefore, we would like to offer this meeting on July 7<sup>th</sup>, 2015 at 1pm EPT either at our office in Cayce, SC or via WebEx. Please let me know if this date/time work for you and your meeting preference.

Also, I have attached the Facilities Study Agreement for your review. We will provide an estimate of the cost and time after the meeting.

Sincerely,

DG Stone

Electric Transmission Support

Office: 803-217-2146

Fax: 803-643-5191

distone@scana.com

MC J36

Confidentiality Notice

This communication may contain <u>non-public transmission</u> information that is proposetary, and subject to disclosure limitations. This information should not be shared with forwarded to or read by any SCANA electric or gas marketing function employee. If you have received this message in error please notify the sender unmediately by raply to this e-mail, and copy Kevin Painter (kpainter@scana.com) and delete all copies of this message.

#### 2 attachments

Lily Solar - NARENCO System Impact Study Report.pdf 329K

Lily Solar Facilities Study Agreement.pdf





Bret Sowers < bret.sowers@narenco.com>

## Lily Solar Interconnection Agreement

1 message

HAMMOND, MATTHEW J (MATT) < MHAMMOND@scana.com>

Thu, Jan 14, 2016 at 1:15 PM

To: Bret Sowers <a href="mailto:bret.sowers@narenco.com">bret.sowers@narenco.com</a>

Cc: "STONE, DJ" <DJSTONE@scana.com>, "BELLE, STEVEN SCOTT" <STEVEN.BELLE@scana.com>

Bret,

Attached, please find the Interconnection Agreement for Lily Solar, LLC. I've also attached the relevant drawing that will be incorporated into the agreement. You have 30 business days, or until February 29th, 2016, to return the executed agreements to me. Please don't fill in the date in the first paragraph. We'll complete that upon final execution. Additionally, please make sure to sign the milestones section of the agreement as well.

Please note that the agreement includes the acceleration optional upgrade of the Fairfax-Salem Switching Station.

Matt Hammond

South Carolina Electric & Gas

Manager, Electric Transmission Support

803-217-2175

Confidentiality Notice

This communication may contain non-public transmission information that is proprietary, and subject to disclosure limitations. This information should not be shared with, forwarded to, or read by any SCANA electric or gas marketing function employee. If you have received this message in error, please notify the sender immediately by reply to this e-mail. and copy Kevin Painter (kpainter@scana.com) and delete all copies of this message

#### 2 attachments

IA SCEG Lily Solar - 1-14-2016.pdf 655K

Attachment 3-A Lily Solar LLC SLD.pdf 893K





Bret Sowers < bret.sowers@narenco.com

## RE: Lily Solar Interconnection Agreement

1 message

Electric Transmission Support < Electric Transmission@scana.com>

Fri, Jan 22, 2016 at 7:52 AM

To: Bret Sowers <bre> <bre>bret.sowers@narenco.com>, Jon Burke <jon.burke@narenco.com>

Cc: "STONE, DJ" <DJSTONE@scana.com>, "BELLE, STEVEN SCOTT" <STEVEN.BELLE@scana.com>

Bret and Jon,

Thank you for your time Wednesday to discuss the interconnection agreement for Lily Solar. At this time, the agreement provided to you last week is the agreement that we plan to move forward with for projects of this nature.

Take care.

Matt Hammond

South Carolina Electric & Gas

Manager, Electric Transmission Support

803-217-2175

#### Confidentiality Notice

This communication may contain <u>non-public transmission</u> information that is proprietary, and subject to disclosure limitations. This information should not be shared with, forwarded to, or read by any SCANA electric or gas marketing function employee. If you have received this message in error, please notify the sender immediately by reply to this email, and copy Kevin Painter (kpainter@scana.com) and delete all copies of this message.

### **BEFORE**

# THE PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA

**DOCKET NO. 2016-89-E** 

IN RE:	)
Lily Solar LLC,	)
Complainant/Petitioner, vs.	CERTIFICATE OF SERVICE )
South Carolina Electric & Gas Company,	)
Defendant/Respondent.	) ) )
I, Carrie A. Schurg, an employee of Austin copies of the Cover Sheet, Lily Solar LLC's Supple Commission on May 20, 2016, with Commission II indicated below, via electronic mail on May 24, 20	ement to its discovery filing with this D "264524", and this Certificate of Service, as
	= 70)
K. Chad Burgess Email: chad.burgess@scana.com	
	/S/ Carrie A. Schurg
May 24, 2016	
Columbia, South Carolina	